



MANITOWOC PUBLIC UTILITIES

1303 South 8th Street P.O. Box 1090 Manitowoc, WI 54221-1090 920-683-4600 FAX 920-686-4348 www.mpu.org

Mr. Randy Matty, P.E.
Air Management Engineer
Wisconsin Department of Natural Resources
2984 Shawano Ave.
Green Bay, WI 54313-6727

January 28, 2014

Subject: Quarterly Excess Emission Report (fourth quarter 2013)

Dear Mr. Matty:

Enclosed please find the Quarterly Excess Emission Report for the Manitowoc Public Utilities Power Plant as required by permit conditions I.D.3.c.(4), I.D.4.c.(5), I.D.5.c.(3), I.E.2.c.(4), I.E.5.c.(3), and I.E.4.c.(3), of permit no.: 436035930-P22. This report is for the quarter ending December 31, 2013 for our facility located at 701 Columbus Street, Manitowoc, Wisconsin. The report includes: quarterly fuel sampling & analysis reports, continuous opacity monitoring system reports on S-10 & S-20, reports on our SO₂, NO_x and CO monitoring systems on Boilers B28 and B09, quarterly audits performed on our opacity monitors and quarterly cylinder gas audits for the Part 60 and/or Part 75 analyzers on Boiler B28 and B09.

(a.) Below is the 12-month rolling average heat input to the diesel.

	<u>P28 Diesel Unit</u>
October	11 mmBtu
November	11 mmBtu
December	11 mmBtu
<u>Applicable Limit</u>	4,814 mmBtu/month
Compliance Status	In Compliance

RICE NESHAP ZZZZ requirements after May 3, 2013:	
Operate no more than 100 hrs/yr for maintenance and readiness testing, emergency demand response, and local system reliability per [63.6640(f)].	P28 operated 1.7 hours after May 3, 2013

(b.) Compliance activities for the fourth quarter of 2013 can be summarized as follows:

	8-SO ₂	8-NO _x	8-CO	9-SO ₂	9-NO _x	9-CO	Opacity S20	Opacity S10
Excess emissions (%)	0%	0%	0%	0%	0%	0%	0 %	0 %
Downtime (%)	0.35 %	0.35 %	5.35 %	0.60%	0.60%	0.26%	0.02 %	0.07 %

Note: MPU submitted an unscheduled event notification to the WDNR for 66 minutes of apparent excess opacity emissions on December 12, 2013. The event occurred on stack S20 and was the result of steam venting from a boiler tube leak and is therefore not an opacity exceedance.

(c.) Below are the 12-month rolling average mass emissions from B09.

	B09 SO2 Tons	B09 NOx Tons
October	6.87 tons/month	1.30 tons/month
November	6.87 tons/month	1.30 tons/month
December	8.66 tons/month	1.68 tons/month
<u>Applicable Limits</u>	71.2 tons per month	24.62 tons per month
	51.02 tons per month	23.33 tons per month
Compliance Status	In Compliance	In Compliance

(d.) Below are the weighted average monthly paper pellet data.

Month	Tons	% Moisture	% Ash	%Sulfur	%Chlorine	BTU Common
September	2,099.6	3.36	5.84	0.10	0.14	10,377
October	1,001.7	3.40	5.25	0.11	0.07	10,210
November	1,853.5	7.10	6.75	0.06	0.24	10,757
December	2,204.9	6.69	6.26	0.19	0.13	10,124

Note: All paper pellets were prepared and provided by Pellet America or Greenwood fuels and are classified by the WDNR as non-municipal solid waste.

(e.) Quarterly EPA ECMPS Monitoring Report Submissions.

Monitoring Location	Submission Type	Date Accepted
8 (S20)	QA QTR 4	01/21/2014
8 (S20)	EM QTR 4	01/22/2014
9	QA QTR 4	01/21/2014
9	EM QTR 4	01/23/2014

(f.) B10 emissions on a 12-month rolling average basis:

Month	B10 Average PM 12-month (lb)	B10 Average Nox 12-month (lb)	B10 Average SO2 12-month (lb)	B10 Average VOC 12-month (lb)	B10 Average GHG 12-month (ton)
Limit	195	1086	16.7	153	1,492
Oct-13	27.5	153.9	2.2	19.9	217.5
Nov-13	26.0	145.6	2.1	18.8	205.7
Dec-13	22.2	124.0	1.8	16.1	175.3

(g.) B28 emissions on a 12-month rolling average basis:

Month	B8 Average PM 12-month (ton)	B8 Average PM10 12-month (ton)	B8 Average PM2.5 12-month (ton)	B8 Average CO 12-month (ton)	B8 Average Pb 12-month (ton)	B8 Average F 12-month (ton)	B8 Average H2SO4 12-month (ton)	B8 Average GHG 12-month (ton)	B8 HI exclude bio. Average HI 12-month mmBtu	S20 (B8) Arsenic 12-month Total	S20 (B8) Nox 12-month Total	S20 (B8) SO2 12-month Total	S20 (B8) Organic Compds 12-month Total	Total B8 HI Rolling 12-month [=] mmBtu
Limit	1.383	1.383	0.94	35.5	1.70E-02	0.054	0.64	13,816.0	133,333	98.1	7.76	34.125	7.76	133,333
Oct-13	0.716	0.716	0.41	5.0	1.12E-04	0.017	0.10	6,160.9	14,122	0.26	3.30	5.367	0.06	57,309
Nov-13	0.740	0.740	0.42	5.3	1.16E-04	0.017	0.10	6,374.4	15,466	0.27	3.07	5.475	0.06	59,212
Dec-13	0.769	0.769	0.44	5.3	1.21E-04	0.018	0.11	6,628.9	17,345	0.28	3.06	5.800	0.06	61,539

(h.) B09 emissions on a 12-month rolling average basis:

Month	B9 Average PM 12-month (ton)	B9 Average PM10 12-month (ton)	B9 Average PM2.5 12-month (ton)	B9 Average CO 12-month (ton)	B9 Average Pb 12-month (ton)	B9 Average F 12-month (ton)	B9 Average H2SO4 12-month (ton)	B9 Average GHG 12-month (ton)	S10 (B9) Arsenic 12-month total
Limit	4.025	3.190	2.560	35.6	0.028	0.3380	0.99	42,289.0	27.40
Oct-13	0.472	0.472	0.297	0.47	2.59E-05	0.0164	0.060	5,989.4	2.21
Nov-13	0.472	0.472	0.297	0.47	2.59E-05	0.0164	#DIV/0!	5,989.3	2.21
Dec-13	0.590	0.590	0.371	0.62	3.24E-05	0.0205	#DIV/0!	7,481.9	2.76

Furthermore, with regards to Boiler B28 and B09, to the best of my knowledge, based on the information supplied to me:

- a) There were 4 boiler operating days for which pollutant or diluent data have not been obtained by an approved method for at least 18 hours of operation of the facility.
- b) The Fc factor for unit B28 ranged from 1,040 to 1,873 and unit B09 ranged from 1,040 to 1,862. The fuel combusted was an 80%/20% pet coke/coal blend either alone or in combination with paper pellets and/or charcoal on units 8 and 9.
- c) There were 0 times when hourly averages have been obtained based on manual sampling methods.
- d) There were 0 times when the pollutant concentration exceeded full span of the continuous monitoring system.
- e) There were 0 modifications to the continuous monitoring system which could affect the ability of the continuous monitoring system to comply with Performance Specification 2 or 3 of 40 CFR part 60, Appendix B.
- f) There were 0 changes made in operation of the emissions control systems during any period of data unavailability.
- g) The required continuous monitoring system calibration, span, and drift checks or other periodic audits have been performed as specified.
- h) The data used to show compliance was obtained in accordance with approved methods and procedures of NR 440 and is representative of plant performance.
- i) The minimum data requirements have been met.
- j) Compliance with the standards has been achieved during the reporting period except as specified in the enclosed reports.

If you have any questions concerning this report please call me at (920) 686-4211.

Sincerely,



Jerry Ahlswede
Energy Supply and Production Supervisor

Cc: Red Jones – MPU, Tom Reed – MPU, Tim Harding – MPU, Scott Karbon – MPU

Enclosure

State of Wisconsin
 Department of Natural Resources
 Box 7921
 Madison, WI 53707

FUEL SAMPLING & ANALYSIS REPORT

Form 4500-134 4-94

Date Received By DNR

PART I. FACILITY INFORMATION

Name of Company / FID	Manitowoc Public Utilities / 436035930	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input checked="" type="checkbox"/> 4 QTR. 2013
Address	701 Columbus Street	Limit <u>None</u>
City, State, Zip Code	Manitowoc, WI 54220	Test Frequency Required <input type="checkbox"/> PER SHIPMENT
Stack/Process	S20 / B28	<input type="checkbox"/> DAILY <input checked="" type="checkbox"/> WEEKLY <input type="checkbox"/> MONTHLY <input type="checkbox"/> QUARTERLY

PART II. EXCESS EMISSIONS (EE)

A. Total Fuel Quantity Used as Fired	<input checked="" type="checkbox"/> tons fuel <input type="checkbox"/> 1000 gallons oil	7,618.8
B. Weighted Average Percent Ash as Fired		4.23
C. Weighted Average Percent Sulfur as Fired		2.11
D. Weighted Average Heat Content as Fired	<u>BTU/pound fuel</u> BTU/gallon oil	11,147
E. Weighted Average Sulfur Dioxide as Fired (pounds SO2/mmBtu) (UNCONTROLLED)		3.78
F. Number of Possible Sample Periods In Qtr. (92,91,90,13,3,1, per shipment)		9
G. Number of Actual Samples Performed Per Quarter		9
H. Number of Samples Over Limit		0
I. Percent Unavailability of Samples ¹		0
J. Percent Excess Emission ²		0

¹ (F-G)/F x 100

Fuel is a blend consisting of petroleum coke and/or coal

² (H/G) x 100

plus paper pellets and charcoal.

**If the total duration of excess emissions is greater than 1% or the total percent unavailability is greater than 5%, then both this Fuel Sampling & Analysis Summary and the Complete Fuel Sampling and Analysis Report shall be submitted. If both conditions are satisfied, then only this Fuel Sampling and Analysis Summary and the results of any fuel audits performed shall be submitted. Additional information may be requested by the Department.

I certify that the information contained in this report is true, accurate, and complete.

Signature <i>Jerry Ahlswede</i>	Title Energy Supply and Production Supervisor	
Printed/Typed Name Jerry Ahlswede	Telephone Number (incl. Area code) (920) 686-4211	Date Signed 1-29-2014

LEAVE BLANK - FOR DNR USE ONLY

Recommendation:

DNR Reviewer _____
 Date Reviewed _____

Comments:

State of Wisconsin
 Department of Natural Resources
 Box 7921
 Madison, WI 53707

FUEL SAMPLING & ANALYSIS REPORT
 Form 4500-134 4-94

Date Received By DNR

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Name of Company / FID	Manitowoc Public Utilities / 436035930	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input checked="" type="checkbox"/> 4 QTR. 2013
Address	701 Columbus Street	Limit <u>None</u>
City, State, Zip Code	Manitowoc, WI 54220	Test Frequency Required <input type="checkbox"/> PER SHIPMENT
Stack/Process	S10 / B09	<input type="checkbox"/> DAILY <input checked="" type="checkbox"/> WEEKLY <input type="checkbox"/> MONTHLY <input type="checkbox"/> QUARTERLY

PART II. EXCESS EMISSIONS (EE)

A. Total Fuel Quantity Used as Fired	<input checked="" type="checkbox"/> tons fuel <input type="checkbox"/> 1000 gallons oil	8,948.7
B. Weighted Average Percent Ash as Fired		2.44
C. Weighted Average Percent Sulfur as Fired		4.02
D. Weighted Average Heat Content as Fired	<u>BTU/pound fuel</u> BTU/gallon oil	12,696
E. Weighted Average Sulfur Dioxide as Fired (pounds SO2/mmBtu) (UNCONTROLLED)		6.02
F. Number of Possible Sample Periods In Qtr. (92,91,90,13,3,1, per shipment)		5
G. Number of Actual Samples Performed Per Quarter		5
H. Number of Samples Over Limit		0
I. Percent Unavailability of Samples ¹		0
J. Percent Excess Emission ²		0

¹ (F-G)/F x 100

Fuel is a blend consisting of petroleum coke and/or coal

² (H/G) x 100

plus paper pellets and charcoal.

**If the total duration of excess emissions is greater than 1% or the total percent unavailability is greater than 5%, then both this Fuel Sampling & Analysis Summary and the Complete Fuel Sampling and Analysis Report shall be submitted. If both conditions are satisfied, then only this Fuel Sampling and Analysis Summary and the results of any fuel audits performed shall be submitted. Additional information may be requested by the Department.

I certify that the information contained in this report is true, accurate, and complete.

Signature <i>Jerry Ahlswede</i>	Title Energy Supply and Production Supervisor	
Printed/Typed Name Jerry Ahlswede	Telephone Number (incl. Area code) (920) 686-4211	Date Signed 1-29-2014

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Recommendation:

DNR Reviewer _____
Date Reviewed _____

Comments:

Note: Completion of this form is required pursuant to chapter NR 439, Wis. Adm. Code

Date Received by DNR

PART I. FACILITY INFORMATION

FID/Name of Company 436035930 / Manitowoc Public Utilities		1 2 3 <input checked="" type="checkbox"/> 4 QTR. 2013
Address 701 Columbus Street Manitowoc, WI 54220		Cert./CEA 12-17-2013 (date)
Emission Limit 20%		
Manufacturer/Model Number United Science Inc. Model No. 550	Stack/Process S10 / P28, B09	Total Source Operating Time in Quarter 41,245 (mins)

PART II. CAUSES OF EXCESS EMISSIONS (EE)	Duration of EE (mins)	% of Operating Time ¹
A. Startup/Shutdown	0	0%
B. Soot Blowing	0	0%
C. Control Equipment Malfunction	0	0%
D. Process Malfunction	0	0%
E. Other Known Causes	0	0%
F. Unknown Causes	0	0%
G. Total (A + B + ...F)	0	0%

PART III. CAUSES OF CEMS DOWNTIME	Downtime (mins)	% of Operating Time ¹
A. Monitor Equipment Malfunction	0	0%
B. Non-Monitor Equipment Malfunction	0	0%
C. QA/QC Calibration	30	0.07%
D. Other Known Causes	0	0%
E. Unknown Causes	0	0%
F. Total (A + B + ...E)	30	0.07%

¹ [EE (mins) or Downtime (mins) / Total Operating Time] x 100

² If the total duration of excess emissions is 1% or greater, or the total CEMS downtime is 5% or greater then both this Unit Summary Report and the Complete Excess Emission Report shall be submitted. If both the total duration of excess emissions is less than 1% and the total CEMS downtime is less than 5%, then only this Unit Summary Report and the quarterly audit shall be submitted.

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Signature <i>Jerry Ahlswede</i>	Title Energy Supply and Production Supervisor
Printed/Typed Name Jerry Ahlswede	Phone Number (incl. Area Code) (920) 686-4211
	Date Signed 1-29-2014

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Recommendation	
DNR Reviewer _____	
Date Reviewed _____	

Note: Completion of this form is required pursuant to chapter NR 439, Wis. Adm. Code

Date Received by DNR

PART I. FACILITY INFORMATION

FID/Name of Company 436035930 / Manitowoc Public Utilities		1 2 3 <input checked="" type="checkbox"/> 4 QTR. 2013
Address 701 Columbus Street Manitowoc, WI 54220		Cert./CEA 12-17-2013 (date)
Emission Limit 20%		
Manufacturer/Model Number United Science Inc. Model No. 550	Stack/Process S20 / B28	Total Source Operating Time in Quarter 84,446 (mins)

PART II. CAUSES OF EXCESS EMISSIONS (EE)	Duration of EE (mins)	% of Operating Time ¹
A. Startup/Shutdown	0	0%
B. Soot Blowing	0	0%
C. Control Equipment Malfunction	0	0%
D. Process Malfunction	0	0%
E. Other Known Causes	0	0%
F. Unknown Causes	0	0%
G. Total (A + B + ...F)	0	0%

PART III. CAUSES OF CEMS DOWNTIME	Downtime (mins)	% of Operating Time ¹
A. Monitor Equipment Malfunction	0	0%
B. Non-Monitor Equipment Malfunction	0	0%
C. QA/QC Calibration	12	0.01%
D. Other Known Causes	6	0.01%
E. Unknown Causes	0	0%
F. Total (A + B + ...E)	18	0.02%

¹ [EE (mins) or Downtime (mins) / Total Operating Time] x 100

² If the total duration of excess emissions is 1% or greater, or the total CEMS downtime is 5% or greater then both this Unit Summary Report and the Complete Excess Emission Report shall be submitted. If both the total duration of excess emissions is less than 1% and the total CEMS downtime is less than 5%, then only this Unit Summary Report and the quarterly audit shall be submitted.

I certify that the information contained in this report is true, accurate, and complete.

Signature <i>Jerry Ahlswede</i>	Title Energy Supply and Production Supervisor
Printed/Typed Name Jerry Ahlswede	Phone Number (incl. Area Code) (920) 686-4211
	Date Signed 1-29-2014

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Recommendation

DNR Reviewer _____
Date Reviewed _____

Excess Emission Report - SO₂/NO_x/TRS/H₂S/VOC/CO/Hg
 Form 4500-126 (R 5/09)

Date Received by DNR

Note: Completion of this form is required pursuant to chapter NR 439, Wis. Adm Code.

PART I. FACILITY INFORMATION

FID/Name of Company 436035930 / Manitowoc Public Utilities		1 2 3 <input checked="" type="checkbox"/> QTR. 2013 Cert. <u>CGA: 11/19/2013</u> (date)
Address 701 Columbus Street, Manitowoc, WI 54220		Type of Audit: <u>CGA</u> , IAA, RAA, RATA
		Emission Limit 0.55 lbs NO _x /mmBtu (30-day rolling ave.) 0.20 lbs NO _x /mmBtu during ozone season
Manufacturer/Model Number	Stack Process	Total Source Operating Time in Quarter <u>1,157.23</u> (hrs)
TEI Model: 42iNOx S/N 0908635558	S20 / B28	Pollutant <u>NO_x</u>

PART II. CAUSES OF EXCESS EMISSIONS (EE)	Duration of EE (hrs)	% of Operating Time ¹
A. Startup/Shutdown	0	0%
B. Process Malfunction	0	0%
C. Control Equipment Malfunction	0	0%
D. Fuel Problems	0	0%
E. Other Known Causes	0	0%
F. Unknown Causes	0	0%
G. Total (A + B + ...F)	0	² 0%

PART III. CAUSES OF CEMS DOWNTIME	Downtime (hrs)	% of Operating Time ¹
A. Monitor Equipment Malfunction	0	0%
B. Non-Monitor Equipment Malfunction	0	0%
C. QA/QC Calibration	4.03	0.35%
D. Other Known Causes	0	0%
E. Unknown Causes	0	0%
F. Total (A + B + ...E)	4.03	² 0.35%

¹ [EE (hrs) or Downtime (hrs) / Total Operating Time] x 100

² If the total duration of excess emissions is 1% or greater, or the total CEMS downtime is 5% or greater then both this Unit Summary Report and the Complete Excess Emission Report shall be submitted. If both the total duration of excess emissions is less than 1% and the total CEMS downtime is less than 5%, then only this Unit Summary Report and the quarterly audit shall be submitted.

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Signature <i>Jerry Ahlswede</i>	Title Energy Supply and Production Supervisor
Printed/Typed Name Jerry Ahlswede	Phone Number (incl. Area Code) (920) 686-4211 Date Signed 1-29-2014

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Recommendation

DNR Reviewer _____
Date Reviewed _____

30 Day Rolling Average Detail

Plant: Manitowoc Public Utilities
Operating Day Criteria = 24 hours

Report Period: 10/01/2013 Through 12/31/2013

Source: S20 Standard Limit: 0.2
Parameter: S20NOX#M

Date	Daily			30 - Day		
	Operating Hours	Valid Hours	Average	Valid Days	Valid Hours	Average
10/01/13	24	24	0.091	30	653	0.075
10/02/13	22	22	0.041 F	30	651	0.073 F
10/03/13	0	0	F	30	651	0.073 F
10/04/13	0	0	F	30	651	0.073 F
10/05/13	0	0	F	30	651	0.073 F
10/06/13	0	0	F	30	651	0.073 F
10/07/13	0	0	F	30	651	0.073 F
10/08/13	0	0	F	30	651	0.073 F
10/09/13	0	0	F	30	651	0.073 F
10/10/13	0	0	F	30	651	0.073 F
10/11/13	0	0	F	30	651	0.073 F
10/12/13	0	0	F	30	651	0.073 F
10/13/13	0	0	F	30	651	0.073 F
10/14/13	0	0	F	30	651	0.073 F
10/15/13	0	0	F	30	651	0.073 F
10/16/13	0	0	F	30	651	0.073 F
10/17/13	0	0	F	30	651	0.073 F
10/18/13	0	0	F	30	651	0.073 F
10/19/13	0	0	F	30	651	0.073 F
10/20/13	0	0	F	30	651	0.073 F
10/21/13	0	0	F	30	651	0.073 F
10/22/13	0	0	F	30	651	0.073 F
10/23/13	0	0	F	30	651	0.073 F
10/24/13	0	0	F	30	651	0.073 F
10/25/13	2	2	0.004 F	30	629	0.070 F
10/26/13	0	0	F	30	629	0.070 F
10/27/13	0	0	F	30	629	0.070 F
10/28/13	21	21	0.187 F	30	629	0.074 F
10/29/13	24	24	0.079	30	635	0.074
10/30/13	24	24	0.082	30	637	0.074
10/31/13	24	24	0.098	30	637	0.075
11/01/13	24	24	0.079	30	637	0.075
11/02/13	21	21	0.080 F	30	634	0.075 F
11/03/13	0	0	F	30	634	0.075 F
11/04/13	20	20	0.046 F	30	630	0.074 F
11/05/13	24	24	0.078	30	630	0.073
11/06/13	24	24	0.097	30	630	0.074
11/07/13	24	24	0.101	30	630	0.075
11/08/13	21	21	0.079 F	30	627	0.076 F
11/09/13	0	0	F	30	627	0.076 F
11/10/13	3	3	0.017 F	30	607	0.075 F
11/11/13	24	24	0.069	30	613	0.075
11/12/13	24	24	0.087	30	617	0.076

F = Unit Offline I = Invalid E = Exceedance

30 Day Rolling Average Detail

Plant: Manitowoc Public Utilities
Operating Day Criteria = 24 hours

Report Period: 10/01/2013 Through 12/31/2013

Source: S20 Standard Limit: 0.2
Parameter: S2ONOX#M

Date	Daily			30 - Day		
	Operating Hours	Valid Hours	Average	Valid Days	Valid Hours	Average
11/13/13	24	24	0.104	30	624	0.076
11/14/13	24	24	0.082	30	627	0.076
11/15/13	21	21	0.079 F	30	624	0.077 F
11/16/13	0	0	F	30	624	0.077 F
11/17/13	2	2	0.013 F	30	605	0.075 F
11/18/13	24	24	0.039	30	628	0.076
11/19/13	24	23	0.067	30	627	0.076
11/20/13	24	24	0.080	30	628	0.076
11/21/13	24	24	0.081	30	628	0.077
11/22/13	24	24	0.085	30	628	0.076
11/23/13	24	24	0.062	30	628	0.075
11/24/13	24	24	0.079	30	631	0.074
11/25/13	24	24	0.091	30	636	0.074
11/26/13	24	24	0.102	30	636	0.076
11/27/13	24	21	0.107	30	633	0.077
11/28/13	24	24	0.137	30	635	0.080
11/29/13	24	24	0.140	30	657	0.084
11/30/13	24	24	0.127	30	660	0.082
12/01/13	24	24	0.132	30	660	0.084
12/02/13	24	24	0.120	30	660	0.085
12/03/13	24	24	0.123	30	660	0.086
12/04/13	24	24	0.129	30	660	0.088
12/05/13	24	24	0.142	30	663	0.090
12/06/13	24	24	0.114	30	667	0.092
12/07/13	24	24	0.134	30	667	0.094
12/08/13	24	24	0.125	30	667	0.095
12/09/13	24	24	0.083	30	667	0.094
12/10/13	24	24	0.094	30	670	0.095
12/11/13	24	24	0.088	30	691	0.097
12/12/13	16	16	0.090 F	30	683	0.098 F
12/13/13	0	0	F	30	683	0.098 F
12/14/13	0	0	F	30	683	0.098 F
12/15/13	0	0	F	30	683	0.098 F
12/16/13	0	0	F	30	683	0.098 F
12/17/13	0	0	F	30	683	0.098 F
12/18/13	0	0	F	30	683	0.098 F
12/19/13	0	0	F	30	683	0.098 F
12/20/13	0	0	F	30	683	0.098 F
12/21/13	0	0	F	30	683	0.098 F
12/22/13	0	0	F	30	683	0.098 F
12/23/13	5	5	0.001 F	30	664	0.095 F
12/24/13	0	0	F	30	664	0.095 F
12/25/13	0	0	F	30	664	0.095 F
12/26/13	20	20	0.246 F	30	660	0.100 F

F = Unit Offline = Invalid E = Exceedance

30 Day Rolling Average Detail

Plant: Manitowoc Public Utilities
Operating Day Criteria = 24 hours

Report Period: 10/01/2013 Through 12/31/2013

Source: S20

Standard Limit: 0.2

Parameter: S20NOX#M

Date	Daily			30 - Day		
	Operating Hours	Valid Hours	Average	Valid Days	Valid Hours	Average
12/27/13	24	24	0.254	30	660	0.106
12/28/13	24	24	0.225	30	663	0.110
12/29/13	24	24	0.206	30	685	0.117
12/30/13	24	24	0.114	30	685	0.119
12/31/13	24	24	0.122	30	686	0.121

F = Unit Offline I = Invalid E = Exceedance

Excess Emission Report - SO₂/NO_x/TRS/H₂S/VOC/CO/Hg
 Form 4500-126 (R 5/09)

Date Received by DNR

Note: Completion of this form is required pursuant to chapter NR 439, Wis. Adm Code.

PART I. FACILITY INFORMATION

FID/Name of Company 436035930 / Manitowoc Public Utilities		1 2 3 <input checked="" type="checkbox"/> 4 QTR. 2013 Cert CGA: 11/19/2013 (date)
Address 701 Columbus Street, Manitowoc, WI 54220		Type of Audit: <u>CGA</u> , IAA, RAA, RATA
Manufacturer/Model Number		Emission Limit 0.89 lbs SO ₂ /mmBtu (30-day rolling ave.) 90% reduction of SO ₂ (30-day rolling ave.) 70% reduction of SO ₂ if S < 1%
TEI Model: 43iSO2 S/N 0908635559	Stack Process S20 / B28	Total Source Operating Time in Quarter <u>1,157.23</u> (hrs)
		Pollutant <u>SO₂</u>

PART II. CAUSES OF EXCESS EMISSIONS (EE)	Duration of EE (hrs)	% of Operating Time ¹
A. Startup/Shutdown	0	0%
B. Process Malfunction	0	0%
C. Control Equipment Malfunction	0	0%
D. Fuel Problems	0	0%
E. Other Known Causes	0	0%
F. Unknown Causes	0	0%
G. Total (A + B + ...F)	0	² 0%

PART III. CAUSES OF CEMS DOWNTIME	Downtime (hrs)	% of Operating Time ¹
A. Monitor Equipment Malfunction	0	0%
B. Non-Monitor Equipment Malfunction	0	0%
C. QA/QC Calibration	4.03	0.35%
D. Other Known Causes	0	0%
E. Unknown Causes	0	0%
F. Total (A + B + ...E)	4.03	² 0.35%

¹ [EE (hrs) or Downtime (hrs) / Total Operating Time] x 100

² If the total duration of excess emissions is 1% or greater, or the total CEMS downtime is 5% or greater then both this Unit Summary Report and the Complete Excess Emission Report shall be submitted. If both the total duration of excess emissions is less than 1% and the total CEMS downtime is less than 5%, then only this Unit Summary Report and the quarterly audit shall be submitted.

I certify that the information contained in this report is true, accurate, and complete.

Signature <i>Jerry Ahlswede</i>	Title Energy Supply and Production Supervisor	
Printed/Typed Name Jerry Ahlswede	Phone Number (incl. Area Code) (920) 686-4211	Date Signed 1-29-2014

LEAVE BLANK - FOR DNR USE ONLY

Recommendation
DNR Reviewer _____
Date Reviewed _____

30 Day Rolling Average Detail

Plant: Manitowoc Public Utilities
Operating Day Criteria = 24 hours

Report Period: 10/01/2013 Through 12/31/2013

Source: S20

Standard Limit: 0.89

Parameter: S20SO2#M

Date	Daily			30 - Day		
	Operating Hours	Valid Hours	Average	Valid Days	Valid Hours	Average
11/13/13	24	24	0.124	30	624	0.150
11/14/13	24	24	0.107	30	627	0.148
11/15/13	21	21	0.236 F	30	624	0.149 F
11/16/13	0	0	F	30	624	0.149 F
11/17/13	2	2	0.000 F	30	605	0.141 F
11/18/13	24	24	0.225	30	628	0.148
11/19/13	24	23	0.166	30	627	0.150
11/20/13	24	24	0.151	30	628	0.151
11/21/13	24	24	0.186	30	628	0.153
11/22/13	24	24	0.195	30	628	0.156
11/23/13	24	24	0.181	30	628	0.157
11/24/13	24	24	0.240	30	631	0.161
11/25/13	24	24	0.233	30	636	0.160
11/26/13	24	24	0.224	30	636	0.159
11/27/13	24	21	0.203	30	633	0.162
11/28/13	24	24	0.233	30	635	0.161
11/29/13	24	24	0.231	30	657	0.167
11/30/13	24	24	0.215	30	660	0.173
12/01/13	24	24	0.226	30	660	0.173
12/02/13	24	24	0.211	30	660	0.174
12/03/13	24	24	0.246	30	660	0.178
12/04/13	24	24	0.246	30	660	0.179
12/05/13	24	24	0.217	30	663	0.181
12/06/13	24	24	0.150	30	667	0.180
12/07/13	24	24	0.125	30	667	0.178
12/08/13	24	24	0.186	30	667	0.179
12/09/13	24	24	0.238	30	667	0.183
12/10/13	24	24	0.231	30	670	0.185
12/11/13	24	24	0.189	30	691	0.191
12/12/13	16	16	0.203 F	30	683	0.192 F
12/13/13	0	0	F	30	683	0.192 F
12/14/13	0	0	F	30	683	0.192 F
12/15/13	0	0	F	30	683	0.192 F
12/16/13	0	0	F	30	683	0.192 F
12/17/13	0	0	F	30	683	0.192 F
12/18/13	0	0	F	30	683	0.192 F
12/19/13	0	0	F	30	683	0.192 F
12/20/13	0	0	F	30	683	0.192 F
12/21/13	0	0	F	30	683	0.192 F
12/22/13	0	0	F	30	683	0.192 F
12/23/13	5	5	0.007 F	30	664	0.188 F
12/24/13	0	0	F	30	664	0.188 F
12/25/13	0	0	F	30	664	0.188 F
12/26/13	20	20	0.103 F	30	660	0.187 F

F = Unit Offline I = Invalid E = Exceedance

30 Day Rolling Average Detail

Plant: Manitowoc Public Utilities
Operating Day Criteria = 24 hours

Report Period: 10/01/2013 Through 12/31/2013

Source: S20

Standard Limit: 0.89

Parameter: S20SO2#M

Date	Daily			30 - Day		
	Operating Hours	Valid Hours	Average	Valid Days	Valid Hours	Average
12/27/13	24	24	0.255	30	660	0.192
12/28/13	24	24	0.231	30	663	0.192
12/29/13	24	24	0.213	30	685	0.199
12/30/13	24	24	0.244	30	685	0.199
12/31/13	24	24	0.250	30	686	0.202

F = Unit Offline I = Invalid E = Exceedance

30 Day Rolling Average Detail

Plant: Manitowoc Public Utilities
Operating Day Criteria = 24 hours

Report Period: 10/01/2013 Through 12/31/2013

Source: S20

Standard Limit:

Parameter: S20SO2RE

Low Limit: 90

Date	Daily			30 - Day		
	Operating Hours	Valid Hours	Average	Valid Days	Valid Hours	Average
10/01/13	24	24	97.3	30	653	93.6
10/02/13	22	22	95.0 F	30	651	93.7 F
10/03/13	0	0	F	30	651	93.7 F
10/04/13	0	0	F	30	651	93.7 F
10/05/13	0	0	F	30	651	93.7 F
10/06/13	0	0	F	30	651	93.7 F
10/07/13	0	0	F	30	651	93.7 F
10/08/13	0	0	F	30	651	93.7 F
10/09/13	0	0	F	30	651	93.7 F
10/10/13	0	0	F	30	651	93.7 F
10/11/13	0	0	F	30	651	93.7 F
10/12/13	0	0	F	30	651	93.7 F
10/13/13	0	0	F	30	651	93.7 F
10/14/13	0	0	F	30	651	93.7 F
10/15/13	0	0	F	30	651	93.7 F
10/16/13	0	0	F	30	651	93.7 F
10/17/13	0	0	F	30	651	93.7 F
10/18/13	0	0	F	30	651	93.7 F
10/19/13	0	0	F	30	651	93.7 F
10/20/13	0	0	F	30	651	93.7 F
10/21/13	0	0	F	30	651	93.7 F
10/22/13	0	0	F	30	651	93.7 F
10/23/13	0	0	F	30	651	93.7 F
10/24/13	0	0	F	30	651	93.7 F
10/25/13	2	2	99.1 F	30	629	93.8 F
10/26/13	0	0	F	30	629	93.8 F
10/27/13	0	0	F	30	629	93.8 F
10/28/13	21	21	99.0 F	30	629	94.0 F
10/29/13	24	24	93.9	30	635	94.0
10/30/13	24	24	94.6	30	637	94.0
10/31/13	24	24	94.2	30	637	94.1
11/01/13	24	24	94.7	30	637	94.1
11/02/13	21	21	95.1 F	30	634	94.1 F
11/03/13	0	0	F	30	634	94.1 F
11/04/13	20	20	95.5 F	30	630	94.2 F
11/05/13	24	24	94.8	30	630	94.4
11/06/13	24	24	95.5	30	630	94.5
11/07/13	24	24	96.3	30	630	94.6
11/08/13	21	21	95.3 F	30	627	94.7 F
11/09/13	0	0	F	30	627	94.7 F
11/10/13	3	3	100.0 F	30	607	95.0 F
11/11/13	24	24	95.3	30	613	95.1
11/12/13	24	24	95.8	30	617	95.2

F = Unit Offline I = Invalid E = Exceedance

30 Day Rolling Average Detail

Plant: Manitowoc Public Utilities
Operating Day Criteria = 24 hours

Report Period: 10/01/2013 Through 12/31/2013

Source: S20

Standard Limit:

Parameter: S20SO2RE

Low Limit:

90

Date	Daily			30 - Day		
	Operating Hours	Valid Hours	Average	Valid Days	Valid Hours	Average
11/13/13	24	24	96.1	30	624	95.1
11/14/13	24	24	96.6	30	627	95.2
11/15/13	21	21	92.4 F	30	624	95.2 F
11/16/13	0	0	F	30	624	95.2 F
11/17/13	2	2	100.0 F	30	605	95.5 F
11/18/13	24	24	95.2	30	628	95.4
11/19/13	24	23	95.3	30	627	95.4
11/20/13	24	24	95.5	30	628	95.4
11/21/13	24	24	94.0	30	628	95.4
11/22/13	24	24	93.8	30	628	95.4
11/23/13	24	24	94.8	30	628	95.5
11/24/13	24	24	92.4	30	631	95.4
11/25/13	24	24	93.6	30	636	95.5
11/26/13	24	24	93.2	30	636	95.5
11/27/13	24	21	94.7	30	633	95.4
11/28/13	24	24	92.5	30	635	95.3
11/29/13	24	24	92.4	30	657	95.1
11/30/13	24	24	93.5	30	660	94.9
12/01/13	24	24	93.9	30	660	94.9
12/02/13	24	24	94.4	30	660	94.9
12/03/13	24	24	93.7	30	660	94.9
12/04/13	24	24	94.0	30	660	94.8
12/05/13	24	24	94.1	30	663	94.8
12/06/13	24	24	96.3	30	667	94.8
12/07/13	24	24	96.6	30	667	94.9
12/08/13	24	24	95.2	30	667	94.9
12/09/13	24	24	94.7	30	667	94.8
12/10/13	24	24	95.0	30	670	94.8
12/11/13	24	24	95.7	30	691	94.7
12/12/13	16	16	95.3 F	30	683	94.7 F
12/13/13	0	0	F	30	683	94.7 F
12/14/13	0	0	F	30	683	94.7 F
12/15/13	0	0	F	30	683	94.7 F
12/16/13	0	0	F	30	683	94.7 F
12/17/13	0	0	F	30	683	94.7 F
12/18/13	0	0	F	30	683	94.7 F
12/19/13	0	0	F	30	683	94.7 F
12/20/13	0	0	F	30	683	94.7 F
12/21/13	0	0	F	30	683	94.7 F
12/22/13	0	0	F	30	683	94.7 F
12/23/13	5	5	99.9 F	30	664	94.8 F
12/24/13	0	0	F	30	664	94.8 F
12/25/13	0	0	F	30	664	94.8 F
12/26/13	20	20	97.7 F	30	660	94.9 F

F = Unit Offline I = Invalid E = Exceedance

30 Day Rolling Average Detail

Plant: Manitowoc Public Utilities
Operating Day Criteria = 24 hours

Report Period: 10/01/2013 Through 12/31/2013

Source: S20

Standard Limit:

Parameter: S20SO2RE

Low Limit: 90

Date	Daily			30 - Day		
	Operating Hours	Valid Hours	Average	Valid Days	Valid Hours	Average
12/27/13	24	24	93.9	30	660	94.8
12/28/13	24	24	93.8	30	663	94.8
12/29/13	24	24	94.7	30	685	94.7
12/30/13	24	24	94.3	30	685	94.6
12/31/13	24	24	93.5	30	686	94.6

F = Unit Offline I = Invalid E = Exceedance

Excess Emission Report - SO₂/NO_x/TRS/H₂S/VOC/CO/Hg
 Form 4500-126 (R 5/09)

Date Received by DNR

Note: Completion of this form is required pursuant to chapter NR 439, Wis. Adm Code.

PART I. FACILITY INFORMATION

FID/Name of Company 436035930 / Manitowoc Public Utilities		1 2 3 <input checked="" type="checkbox"/> 4 QTR. 2013 Cert. CGA: 11/19/2013 (date)
Address 701 Columbus Street, Manitowoc, WI 54220		Type of Audit: <u>CGA</u> , IAA, RAA, RATA
Manufacturer/Model Number TEI Model: 48iCO S/N CMO8270019		Emission Limit <u>0.36 lbs CO/mmBtu (30-day rolling ave.)</u>
Stack Process S20 / B28		Total Source Operating Time in Quarter <u>1,157.23</u> (hrs)
		Pollutant <u>CO</u>

PART II. CAUSES OF EXCESS EMISSIONS (EE)	Duration of EE (hrs)	% of Operating Time ¹
A. Startup/Shutdown	0	0%
B. Process Malfunction	0	0%
C. Control Equipment Malfunction	0	0%
D. Fuel Problems	0	0%
E. Other Known Causes	0	0%
F. Unknown Causes	0	0%
G. Total (A + B + ...F)	0	² 0%

PART III. CAUSES OF CEMS DOWNTIME	Downtime (hrs)	% of Operating Time ¹
A. Monitor Equipment Malfunction	0	0%
B. Non-Monitor Equipment Malfunction	0	0%
C. QA/QC Calibration	62.0	5.35%
D. Other Known Causes	0	0%
E. Unknown Causes	0	0%
F. Total (A + B + ...E)	62.0	² 5.35%

¹ [EE (hrs) or Downtime (hrs) / Total Operating Time] x 100

² If the total duration of excess emissions is 1% or greater, or the total CEMS downtime is 5% or greater then both this Unit Summary Report and the Complete Excess Emission Report shall be submitted. If both the total duration of excess emissions is less than 1% and the total CEMS downtime is less than 5%, then only this Unit Summary Report and the quarterly audit shall be submitted.

I certify that the information contained in this report is true, accurate, and complete.

Signature <i>Jerry Ahlswede</i>	Title Energy Supply and Production Supervisor
Printed/Typed Name Jerry Ahlswede	Phone Number (incl. Area Code) (920) 686-4211
	Date Signed 1-29-2014

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Recommendation
DNR Reviewer _____
Date Reviewed _____

30 Day Rolling Average Detail

Plant: Manitowoc Public Utilities
Operating Day Criteria = 1 hours

Report Period: 10/01/2013 Through 10/31/2013

Source: S20

Standard Limit: 0.36

Parameter: S20CO#M

Date	Daily			30 - Day		
	Operating Hours	Valid Hours	Average	Valid Days	Valid Hours	Average
10/01/13	24	24	0.054	30	648	0.067
10/02/13	22	22	0.045	30	646	0.067
10/03/13	0	0	F	30	646	0.067 F
10/04/13	0	0	F	30	646	0.067 F
10/05/13	0	0	F	30	646	0.067 F
10/06/13	0	0	F	30	646	0.067 F
10/07/13	0	0	F	30	646	0.067 F
10/08/13	0	0	F	30	646	0.067 F
10/09/13	0	0	F	30	646	0.067 F
10/10/13	0	0	F	30	646	0.067 F
10/11/13	0	0	F	30	646	0.067 F
10/12/13	0	0	F	30	646	0.067 F
10/13/13	0	0	F	30	646	0.067 F
10/14/13	0	0	F	30	646	0.067 F
10/15/13	0	0	F	30	646	0.067 F
10/16/13	0	0	F	30	646	0.067 F
10/17/13	0	0	F	30	646	0.067 F
10/18/13	0	0	F	30	646	0.067 F
10/19/13	0	0	F	30	646	0.067 F
10/20/13	0	0	F	30	646	0.067 F
10/21/13	0	0	F	30	646	0.067 F
10/22/13	0	0	F	30	646	0.067 F
10/23/13	0	0	F	30	646	0.067 F
10/24/13	0	0	F	30	646	0.067 F
10/25/13	0	0	F	30	646	0.067 F
10/26/13	0	0	F	30	646	0.067 F
10/27/13	0	0	F	30	646	0.067 F
10/28/13	15	15	0.115	30	637	0.069
10/29/13	24	24	0.033	30	637	0.069
10/30/13	24	24	0.026	30	640	0.068
10/31/13	24	24	0.062	30	648	0.068

F = Unit Offline I = Invalid E = Exceedance

30 Day Rolling Average Detail

Plant: Manitowoc Public Utilities
Operating Day Criteria = 1 hours

Report Period: 11/01/2013 Through 11/30/2013

Source: S20

Standard Limit: 0.36

Parameter: S20CO#M

Date	Daily			30 - Day		
	Operating Hours	Valid Hours	Average	Valid Days	Valid Hours	Average
11/01/13	24	24	0.057	30	656	0.066
11/02/13	21	21	0.058	30	653	0.066
11/03/13	0	0	F	30	653	0.066 F
11/04/13	14	14	0.043	30	643	0.065
11/05/13	24	24	0.061	30	643	0.066
11/06/13	24	24	0.071	30	643	0.068
11/07/13	24	24	0.073	30	643	0.069
11/08/13	21	21	0.054	30	640	0.070
11/09/13	0	0	F	30	640	0.070 F
11/10/13	0	0	F	30	640	0.070 F
11/11/13	19	19	0.043	30	635	0.069
11/12/13	24	24	0.042	30	635	0.070
11/13/13	24	24	0.047	30	636	0.070
11/14/13	24	24	0.029	30	645	0.056
11/15/13	21	21	0.043	30	646	0.055
11/16/13	0	0	F	30	646	0.055 F
11/17/13	0	0	F	30	646	0.055 F
11/18/13	21	21	0.059	30	658	0.055
11/19/13	24	23	0.035	30	662	0.051
11/20/13	24	24	0.033	30	662	0.051
11/21/13	24	24	0.038	30	665	0.050
11/22/13	24	24	0.044	30	670	0.049
11/23/13	24	24	0.038	30	671	0.049
11/24/13	24	24	0.053	30	671	0.049
11/25/13	24	24	0.051	30	671	0.050
11/26/13	24	24	0.033	30	671	0.050
11/27/13	24	21	0.038	30	671	0.050
11/28/13	24	24	0.029	30	678	0.048
11/29/13	24	24	0.029	30	678	0.048
11/30/13	24	24	0.032	30	678	0.047

F = Unit Offline I = Invalid E = Exceedance

30 Day Rolling Average Detail

Plant: Manitowoc Public Utilities
Operating Day Criteria = 1 hours

Report Period: 12/01/2013 Through 12/31/2013

Source: S20

Standard Limit: 0.36

Parameter: S2OCO#M

Date	Daily			30 - Day		
	Operating Hours	Valid Hours	Average	Valid Days	Valid Hours	Average
12/01/13	24	24	0.035	30	680	0.047
12/02/13	24	24	0.031	30	689	0.044
12/03/13	24	24	0.032	30	689	0.044
12/04/13	24	24	0.045	30	689	0.045
12/05/13	24	24	0.038	30	689	0.044
12/06/13	24	24	0.037	30	689	0.043
12/07/13	24	24	0.043	30	692	0.043
12/08/13	24	24	0.041	30	702	0.043
12/09/13	24	24	0.040	30	702	0.042
12/10/13	24	22	0.043	30	700	0.041
12/11/13	24	24	0.031	30	700	0.039
12/12/13	16	16	0.037	30	695	0.039
12/13/13	0	0	F	30	695	0.039 F
12/14/13	0	0	F	30	695	0.039 F
12/15/13	0	0	F	30	695	0.039 F
12/16/13	0	0	F	30	695	0.039 F
12/17/13	0	0	F	30	695	0.039 F
12/18/13	0	0	F	30	695	0.039 F
12/19/13	0	0	F	30	695	0.039 F
12/20/13	0	0	F	30	695	0.039 F
12/21/13	0	0	F	30	695	0.039 F
12/22/13	0	0	F	30	695	0.039 F
12/23/13	0	0	F	30	695	0.039 F
12/24/13	0	0	F	30	695	0.039 F
12/25/13	0	0	F	30	695	0.039 F
12/26/13	13	13	0.052	30	689	0.039
12/27/13	24	24	0.024	30	689	0.039
12/28/13	24	7	-0.001	29	655	0.038
12/29/13	24	0		28	611	0.039
12/30/13	24	16	0.036	27	620	0.039
12/31/13	24	7	0.036	26	599	0.038

F = Unit Offline I = Invalid E = Exceedance

Excess Emission Report - SO₂/NO_x/TRS/H₂S/VOC/CO/Hg
 Form 4500-126 (R 5/09)

Date Received by DNR

Note: Completion of this form is required pursuant to chapter NR 439, Wis. Adm Code.

PART I. FACILITY INFORMATION

FID/Name of Company 436035930 / Manitowoc Public Utilities		1 2 3 4 QTR. 2013 Cert. <u>CGA: 12-10-2013</u> (date)
Address 701 Columbus Street, Manitowoc, WI 54220		Type of Audit: <u>CGA</u> , IAA, RAA, RATA
		Emission Limit <u>0.155 lbs NO_x/mmBtu (30-day rolling ave.)</u>
Manufacturer/Model Number	Stack Process	Total Source Operating Time in Quarter <u>683.92</u> (hrs)
TEI Model: 42iNOx S/N 42i0510511562	S10 / B09	Pollutant <u>NO_x</u>

PART II. CAUSES OF EXCESS EMISSIONS (EE)	Duration of EE (hrs)	% of Operating Time ¹
A. Startup/Shutdown	0	0%
B. Process Malfunction	0	0%
C. Control Equipment Malfunction	0	0%
D. Fuel Problems	0	0%
E. Other Known Causes	0	0%
F. Unknown Causes	0	0%
G. Total (A + B + ...F)	0	² 0%

PART III. CAUSES OF CEMS DOWNTIME	Downtime (hrs)	% of Operating Time ¹
A. Monitor Equipment Malfunction	0	0%
B. Non-Monitor Equipment Malfunction	0	0%
C. QA/QC Calibration	4.07	0.60%
D. Other Known Causes	0	0%
E. Unknown Causes	0	0%
F. Total (A + B + ...E)	4.07	² 0.60%

¹ [EE (hrs) or Downtime (hrs) / Total Operating Time] x 100

² If the total duration of excess emissions is 1% or greater, or the total CEMS downtime is 5% or greater then both this Unit Summary Report and the Complete Excess Emission Report shall be submitted. If both the total duration of excess emissions is less than 1% and the total CEMS downtime is less than 5%, then only this Unit Summary Report and the quarterly audit shall be submitted.

I certify that the information contained in this report is true, accurate, and complete.

Signature <i>Jerry Ahlswede</i>	Title Energy Supply and Production Supervisor
Printed/Typed Name Jerry Ahlswede	Date Signed 1-29-2014

LEAVE BLANK - FOR DNR USE ONLY

Recommendation
DNR Reviewer _____
Date Reviewed _____

30 Day Rolling Average Detail

Plant: Manitowoc Public Utilities

Operating Day Criteria = 1 hours

Report Period: 12/01/2013 Through 12/31/2013

Source: B9 Standard Limit: 0.15

Parameter: B9NOX#M

Date	Daily			30 - Day		
	Operating Hours	Valid Hours	Average	Valid Days	Valid Hours	Average
12/01/13	0	0	F	30	638	0.040 F
12/02/13	0	0	F	30	638	0.040 F
12/03/13	0	0	F	30	638	0.040 F
12/04/13	0	0	F	30	638	0.040 F
12/05/13	0	0	F	30	638	0.040 F
12/06/13	1	0	I	29	614	0.041
12/07/13	0	0	F	29	614	0.041 F
12/08/13	9	9	0.078	29	599	0.042
12/09/13	24	24	0.040	29	599	0.042
12/10/13	24	22	0.054	29	597	0.043
12/11/13	24	23	0.058	29	596	0.044
12/12/13	24	24	0.059	29	596	0.045
12/13/13	24	24	0.051	29	596	0.045
12/14/13	24	24	0.067	29	596	0.046
12/15/13	24	24	0.054	29	596	0.047
12/16/13	24	24	0.043	29	596	0.046
12/17/13	24	24	0.061	29	597	0.047
12/18/13	24	24	0.065	29	620	0.049
12/19/13	24	24	0.046	29	639	0.048
12/20/13	24	24	0.060	29	639	0.049
12/21/13	24	24	0.070	29	639	0.051
12/22/13	24	24	0.081	29	639	0.053
12/23/13	24	24	0.064	29	639	0.053
12/24/13	24	24	0.040	29	641	0.053
12/25/13	24	24	0.043	29	660	0.052
12/26/13	24	24	0.035	29	660	0.052
12/27/13	21	21	0.033	29	657	0.051
12/28/13	0	0	F	29	657	0.051 F
12/29/13	0	0	F	29	657	0.051 F
12/30/13	0	0	F	29	657	0.051 F
12/31/13	0	0	F	29	657	0.051 F

F = Unit Offline I = Invalid E = Exceedance

Date Received by DNR

Note: Completion of this form is required pursuant to chapter NR 439, Wis. Adm Code.

PART I. FACILITY INFORMATION

FID/Name of Company 436035930 / Manitowoc Public Utilities		1 2 3 <input checked="" type="checkbox"/> 4 QTR. 2013 Cert. <u>CGA: 12-10-2013</u> (date)
Address 701 Columbus Street, Manitowoc, WI 54220		Type of Audit: <u>CGA</u> , IAA, RAA, RATA
		Emission Limit 0.30 lbs SO ₂ /mmBtu (30-day rolling ave.) 70% reduction of SO ₂ (30-day rolling ave.)
Manufacturer/Model Number	Stack Process	Total Source Operating Time in Quarter <u>683.92</u> (hrs)
TEI Model: 43iSO2 S/N 43i0510511567	S10 / B09	Pollutant <u>SO₂</u>

PART II. CAUSES OF EXCESS EMISSIONS (EE)	Duration of EE (hrs)	% of Operating Time ¹
A. Startup/Shutdown	0	0%
B. Process Malfunction	0	0%
C. Control Equipment Malfunction	0	0%
D. Fuel Problems	0	0%
E. Other Known Causes	0	0%
F. Unknown Causes	0	0%
G. Total (A + B + ...F)	0	² 0%

PART III. CAUSES OF CEMS DOWNTIME	Downtime (hrs)	% of Operating Time ¹
A. Monitor Equipment Malfunction	0	0%
B. Non-Monitor Equipment Malfunction	0	0%
C. QA/QC Calibration	4.07	0.60%
D. Other Known Causes	0	0%
E. Unknown Causes	0	0%
F. Total (A + B + ...E)	4.07	² 0.60%

¹ [EE (hrs) or Downtime (hrs) / Total Operating Time] x 100

² If the total duration of excess emissions is 1% or greater, or the total CEMS downtime is 5% or greater then both this Unit Summary Report and the Complete Excess Emission Report shall be submitted. If both the total duration of excess emissions is less than 1% and the total CEMS downtime is less than 5%, then only this Unit Summary Report and the quarterly audit shall be submitted.

I certify that the information contained in this report is true, accurate, and complete.

Signature <i>Jerry Ahlswede</i>	Title Energy Supply and Production Supervisor	
Printed/Typed Name Jerry Ahlswede	Phone Number (incl. Area Code) (920) 686-4211	Date Signed 1-29-2014

LEAVE BLANK - FOR DNR USE ONLY

Recommendation
DNR Reviewer _____ Date Reviewed _____

30 Day Rolling Average Detail

Plant: Manitowoc Public Utilities
Operating Day Criteria = 1 hours

Report Period: 10/01/2013 Through 10/31/2013

Source: B9
Parameter: B9SO2#M

Standard Limit: 0.3

Date	Daily			30 - Day		
	Operating Hours	Valid Hours	Average	Valid Days	Valid Hours	Average
10/01/13	24	24	0.245	30	587	0.204
10/02/13	24	24	0.241	30	607	0.212
10/03/13	24	24	0.236	30	607	0.209
10/04/13	24	24	0.244	30	607	0.209
10/05/13	24	24	0.245	30	607	0.210
10/06/13	24	24	0.244	30	615	0.210
10/07/13	24	24	0.237	30	619	0.208
10/08/13	24	24	0.241	30	619	0.209
10/09/13	23	23	0.254	30	634	0.211
10/10/13	0	0	F	30	634	0.211 F
10/11/13	0	0	F	30	634	0.211 F
10/12/13	0	0	F	30	634	0.211 F
10/13/13	0	0	F	30	634	0.211 F
10/14/13	7	7	0.000	30	638	0.211
10/15/13	0	0	F	30	638	0.211 F
10/16/13	0	0	F	30	638	0.211 F
10/17/13	0	0	F	30	638	0.211 F
10/18/13	0	0	F	30	638	0.211 F
10/19/13	0	0	F	30	638	0.211 F
10/20/13	0	0	F	30	638	0.211 F
10/21/13	0	0	F	30	638	0.211 F
10/22/13	0	0	F	30	638	0.211 F
10/23/13	0	0	F	30	638	0.211 F
10/24/13	0	0	F	30	638	0.211 F
10/25/13	0	0	F	30	638	0.211 F
10/26/13	0	0	F	30	638	0.211 F
10/27/13	0	0	F	30	638	0.211 F
10/28/13	0	0	F	30	638	0.211 F
10/29/13	0	0	F	30	638	0.211 F
10/30/13	0	0	F	30	638	0.211 F
10/31/13	0	0	F	30	638	0.211 F

F = Unit Offline I = Invalid E = Exceedance

30 Day Rolling Average Detail

Plant: Manitowoc Public Utilities
Operating Day Criteria = 1 hours

Report Period: 10/01/2013 Through 10/31/2013

Source: B9

Standard Limit:

Parameter: B9SO2RED

Low Limit: 90

Date	Daily			30 - Day		
	Operating Hours	Valid Hours	Average	Valid Days	Valid Hours	Average
10/01/13	24	24	96.0	30	587	96.7
10/02/13	24	24	96.1	30	607	96.6
10/03/13	24	24	96.3	30	607	96.6
10/04/13	24	24	96.0	30	607	96.6
10/05/13	24	24	96.1	30	607	96.6
10/06/13	24	24	95.8	30	615	96.6
10/07/13	24	24	96.2	30	619	96.7
10/08/13	24	24	96.0	30	619	96.6
10/09/13	23	23	95.6	30	634	96.6
10/10/13	0	0	F	30	634	96.6 F
10/11/13	0	0	F	30	634	96.6 F
10/12/13	0	0	F	30	634	96.6 F
10/13/13	0	0	F	30	634	96.6 F
10/14/13	7	7	100.0	30	638	96.6
10/15/13	0	0	F	30	638	96.6 F
10/16/13	0	0	F	30	638	96.6 F
10/17/13	0	0	F	30	638	96.6 F
10/18/13	0	0	F	30	638	96.6 F
10/19/13	0	0	F	30	638	96.6 F
10/20/13	0	0	F	30	638	96.6 F
10/21/13	0	0	F	30	638	96.6 F
10/22/13	0	0	F	30	638	96.6 F
10/23/13	0	0	F	30	638	96.6 F
10/24/13	0	0	F	30	638	96.6 F
10/25/13	0	0	F	30	638	96.6 F
10/26/13	0	0	F	30	638	96.6 F
10/27/13	0	0	F	30	638	96.6 F
10/28/13	0	0	F	30	638	96.6 F
10/29/13	0	0	F	30	638	96.6 F
10/30/13	0	0	F	30	638	96.6 F
10/31/13	0	0	F	30	638	96.6 F

F = Unit Offline I = Invalid E = Exceedance

30 Day Rolling Average Detail

Plant: Manitowoc Public Utilities
Operating Day Criteria = 1 hours

Report Period: 11/01/2013 Through 11/30/2013

Source: B9

Standard Limit:

Parameter: B9SO2RED

Low Limit: 90

Date	Daily			30 - Day		
	Operating Hours	Valid Hours	Average	Valid Days	Valid Hours	Average
11/01/13	0	0	F	30	638	96.6 F
11/02/13	0	0	F	30	638	96.6 F
11/03/13	0	0	F	30	638	96.6 F
11/04/13	0	0	F	30	638	96.6 F
11/05/13	0	0	F	30	638	96.6 F
11/06/13	0	0	F	30	638	96.6 F
11/07/13	0	0	F	30	638	96.6 F
11/08/13	0	0	F	30	638	96.6 F
11/09/13	0	0	F	30	638	96.6 F
11/10/13	0	0	F	30	638	96.6 F
11/11/13	0	0	F	30	638	96.6 F
11/12/13	0	0	F	30	638	96.6 F
11/13/13	0	0	F	30	638	96.6 F
11/14/13	0	0	F	30	638	96.6 F
11/15/13	0	0	F	30	638	96.6 F
11/16/13	0	0	F	30	638	96.6 F
11/17/13	0	0	F	30	638	96.6 F
11/18/13	0	0	F	30	638	96.6 F
11/19/13	0	0	F	30	638	96.6 F
11/20/13	0	0	F	30	638	96.6 F
11/21/13	0	0	F	30	638	96.6 F
11/22/13	0	0	F	30	638	96.6 F
11/23/13	0	0	F	30	638	96.6 F
11/24/13	0	0	F	30	638	96.6 F
11/25/13	0	0	F	30	638	96.6 F
11/26/13	0	0	F	30	638	96.6 F
11/27/13	0	0	F	30	638	96.6 F
11/28/13	0	0	F	30	638	96.6 F
11/29/13	0	0	F	30	638	96.6 F
11/30/13	0	0	F	30	638	96.6 F

F = Unit Offline I = Invalid E = Exceedance

30 Day Rolling Average Detail

Plant: Manitowoc Public Utilities
Operating Day Criteria = 1 hours

Report Period: 12/01/2013 Through 12/31/2013

Source: B9

Standard Limit:

Parameter: B9SO2RED

Low Limit:

90

Date	Daily			30 - Day		
	Operating Hours	Valid Hours	Average	Valid Days	Valid Hours	Average
12/01/13	0	0	F	30	638	96.6 F
12/02/13	0	0	F	30	638	96.6 F
12/03/13	0	0	F	30	638	96.6 F
12/04/13	0	0	F	30	638	96.6 F
12/05/13	0	0	F	30	638	96.6 F
12/06/13	1	0	I	29	614	96.6
12/07/13	0	0	F	29	614	96.6 F
12/08/13	9	9	99.2	29	599	96.7
12/09/13	24	24	95.9	29	599	96.7
12/10/13	24	22	95.8	29	597	96.7
12/11/13	24	23	96.0	29	596	96.7
12/12/13	24	24	94.3	29	596	96.6
12/13/13	24	24	96.1	29	596	96.6
12/14/13	24	24	96.2	29	596	96.6
12/15/13	24	24	96.3	29	596	96.6
12/16/13	24	24	96.6	29	596	96.6
12/17/13	24	24	96.3	29	597	96.6
12/18/13	24	24	96.2	29	620	96.5
12/19/13	24	24	96.4	29	639	96.3
12/20/13	24	24	96.5	29	639	96.4
12/21/13	24	24	97.1	29	639	96.4
12/22/13	24	24	96.5	29	639	96.4
12/23/13	24	24	96.2	29	639	96.5
12/24/13	24	24	96.3	29	641	96.5
12/25/13	24	24	96.5	29	660	96.3
12/26/13	24	24	96.3	29	660	96.4
12/27/13	21	21	96.1	29	657	96.4
12/28/13	0	0	F	29	657	96.4 F
12/29/13	0	0	F	29	657	96.4 F
12/30/13	0	0	F	29	657	96.4 F
12/31/13	0	0	F	29	657	96.4 F

F = Unit Offline I = Invalid E = Exceedance

Date Received by DNR

Note: Completion of this form is required pursuant to chapter NR 439, Wis. Adm Code.

PART I. FACILITY INFORMATION

FID/Name of Company 436035930 / Manitowoc Public Utilities		1 2 3 <input checked="" type="checkbox"/> 4 QTR. 2013 Cert. CGA: 12-10-2013 (date)
Address 701 Columbus Street, Manitowoc, WI 54220		Type of Audit: CGA, IAA, RAA, RATA
		Emission Limit 0.15 lbs CO/mmBtu (30-day rolling ave.)
Manufacturer/Model Number	Stack Process	Total Source Operating Time in Quarter 683.92 (hrs)
TEI Model: 48iCO S/N 48i0510511587	S10 / B09	Pollutant CO

PART II. CAUSES OF EXCESS EMISSIONS (EE)	Duration of EE (hrs)	% of Operating Time ¹
A. Startup/Shutdown	0	0%
B. Process Malfunction	0	0%
C. Control Equipment Malfunction	0	0%
D. Fuel Problems	0	0%
E. Other Known Causes	0	0%
F. Unknown Causes	0	0%
G. Total (A + B + ...F)	0	² 0%

PART III. CAUSES OF CEMS DOWNTIME	Downtime (hrs)	% of Operating Time ¹
A. Monitor Equipment Malfunction	0	0%
B. Non-Monitor Equipment Malfunction	0	0%
C. QA/QC Calibration	1.00	0.15%
D. Other Known Causes	0.75	0.11%
E. Unknown Causes	0	0%
F. Total (A + B + ...E)	1.75	² 0.26%

¹ [EE (hrs) or Downtime (hrs) / Total Operating Time] x 100

² If the total duration of excess emissions is 1% or greater, or the total CEMS downtime is 5% or greater then both this Unit Summary Report and the Complete Excess Emission Report shall be submitted. If both the total duration of excess emissions is less than 1% and the total CEMS downtime is less than 5%, then only this Unit Summary Report and the quarterly audit shall be submitted.

I certify that the information contained in this report is true, accurate, and complete.

Signature <i>Jerry Ahlswede</i>	Title Energy Supply and Production Supervisor	
Printed/Typed Name Jerry Ahlswede	Phone Number (incl. Area Code) (920) 686-4211	Date Signed 1-29-2014

LEAVE BLANK - FOR DNR USE ONLY

Recommendation
DNR Reviewer _____ Date Reviewed _____

30 Day Rolling Average Detail

Plant: Manitowoc Public Utilities

Operating Day Criteria = 1 hours

Report Period: 10/01/2013 Through 10/31/2013

Source: B9

Standard Limit:

0.15

Parameter: B9CO#M

Date	Daily			30 - Day		
	Operating Hours	Valid Hours	Average	Valid Days	Valid Hours	Average
10/01/13	24	24	0.026	30	657	0.020
10/02/13	24	24	0.030	30	657	0.020
10/03/13	24	24	0.028	30	657	0.021
10/04/13	24	24	0.032	30	659	0.022
10/05/13	24	24	0.035	30	659	0.022
10/06/13	24	24	0.049	30	661	0.023
10/07/13	24	24	0.032	30	665	0.023
10/08/13	24	24	0.042	30	665	0.024
10/09/13	23	23	0.038	30	664	0.025
10/10/13	0	0	F	30	664	0.025 F
10/11/13	0	0	F	30	664	0.025 F
10/12/13	0	0	F	30	664	0.025 F
10/13/13	0	0	F	30	664	0.025 F
10/14/13	0	0	F	30	664	0.025 F
10/15/13	0	0	F	30	664	0.025 F
10/16/13	0	0	F	30	664	0.025 F
10/17/13	0	0	F	30	664	0.025 F
10/18/13	0	0	F	30	664	0.025 F
10/19/13	0	0	F	30	664	0.025 F
10/20/13	0	0	F	30	664	0.025 F
10/21/13	0	0	F	30	664	0.025 F
10/22/13	0	0	F	30	664	0.025 F
10/23/13	0	0	F	30	664	0.025 F
10/24/13	0	0	F	30	664	0.025 F
10/25/13	0	0	F	30	664	0.025 F
10/26/13	0	0	F	30	664	0.025 F
10/27/13	0	0	F	30	664	0.025 F
10/28/13	0	0	F	30	664	0.025 F
10/29/13	0	0	F	30	664	0.025 F
10/30/13	0	0	F	30	664	0.025 F
10/31/13	0	0	F	30	664	0.025 F

F = Unit Offline I = Invalid E = Exceedance

30 Day Rolling Average Detail

Plant: Manitowoc Public Utilities
Operating Day Criteria = 1 hours

Report Period: 11/01/2013 Through 11/30/2013

Source: B9 Standard Limit: 0.15
Parameter: B9CO#M

Date	Daily			30 - Day		
	Operating Hours	Valid Hours	Average	Valid Days	Valid Hours	Average
11/01/13	0	0	F	30	664	0.025 F
11/02/13	0	0	F	30	664	0.025 F
11/03/13	0	0	F	30	664	0.025 F
11/04/13	0	0	F	30	664	0.025 F
11/05/13	0	0	F	30	664	0.025 F
11/06/13	0	0	F	30	664	0.025 F
11/07/13	0	0	F	30	664	0.025 F
11/08/13	0	0	F	30	664	0.025 F
11/09/13	0	0	F	30	664	0.025 F
11/10/13	0	0	F	30	664	0.025 F
11/11/13	0	0	F	30	664	0.025 F
11/12/13	0	0	F	30	664	0.025 F
11/13/13	0	0	F	30	664	0.025 F
11/14/13	0	0	F	30	664	0.025 F
11/15/13	0	0	F	30	664	0.025 F
11/16/13	0	0	F	30	664	0.025 F
11/17/13	0	0	F	30	664	0.025 F
11/18/13	0	0	F	30	664	0.025 F
11/19/13	0	0	F	30	664	0.025 F
11/20/13	0	0	F	30	664	0.025 F
11/21/13	0	0	F	30	664	0.025 F
11/22/13	0	0	F	30	664	0.025 F
11/23/13	0	0	F	30	664	0.025 F
11/24/13	0	0	F	30	664	0.025 F
11/25/13	0	0	F	30	664	0.025 F
11/26/13	0	0	F	30	664	0.025 F
11/27/13	0	0	F	30	664	0.025 F
11/28/13	0	0	F	30	664	0.025 F
11/29/13	0	0	F	30	664	0.025 F
11/30/13	0	0	F	30	664	0.025 F

F = Unit Offline I = Invalid E = Exceedance

